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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional)											
<p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]</p> <p>on _____</p> <p>Signature _____</p> <p>Typed or printed name _____</p>		Application Number	Filed										
		10/779,373	February 17, 2004										
		First Named Inventor											
		Marc Schaepkens											
		Art Unit	Examiner										
		1794	Kevin R. Kruer										
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <table border="0"><tr><td><input type="checkbox"/> applicant/inventor.</td><td>/mcc/</td></tr><tr><td><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</td><td>Signature Mark C. Comtois</td></tr><tr><td><input checked="" type="checkbox"/> attorney or agent of record. Registration number 46,285</td><td>Typed or printed name 202-776-7800</td></tr><tr><td><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</td><td>Telephone number 10 April 2009</td></tr><tr><td></td><td>Date</td></tr></table> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>				<input type="checkbox"/> applicant/inventor.	/mcc/	<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	Signature Mark C. Comtois	<input checked="" type="checkbox"/> attorney or agent of record. Registration number 46,285	Typed or printed name 202-776-7800	<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____	Telephone number 10 April 2009		Date
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<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____	Telephone number 10 April 2009												
	Date												
<input checked="" type="checkbox"/> *Total of 3 forms are submitted.													

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Patent Application of Marc SCHAEPKENS *et al.*

Conf. No.: 7897

Appl. S.N.: 10/779,373

Art Unit: 1794

Filed: 17 February 2004

Examiner: Kevin R. Kruer

Title: COMPOSITE ARTICLES HAVING DIFFUSION BARRIERS AND DEVICES  
INCORPORATING THE SAME

**PRE-APPEAL CONFERENCE BRIEF**

Mail Stop Appeals - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In support of Applicant's request for a pre-appeal conference, Applicant submits the following remarks.

**I. Claims 1 and 8**

**A. The claim limitation at issue.**

There are two independent claims in the present application, Claims 1 and 8. Each of these claims recites, *inter alia*, the following limitation: "at least one of said diffusion-inhibiting barriers comprises a material, the composition of which varies substantially continuously across a thickness thereof".

B. The rejections.

Each of the independent claims currently stand rejected as being unpatentable over each of the following three combinations of prior art: Chung, et al. (U.S. Pat. No. 6,836,070; "Chung") in view of Otto, et al. (U.S. Patent No. 5,643,638; "Otto"); Graff (U.S. Pat. No. 6,492,026; "Graff") in view of Otto; and Silvernail (U.S. Pat. No. 6,576,351; "Silvernail") in view of Otto.

1. The Office acknowledges that neither Chung, Graff, or Silvernail teach the limitation at issue (*see* Final Office Action dated 12/10/2008: page 3, first paragraph, first sentence (for Chung); page 4, first full paragraph, first sentence (for Graff); and page 5, first full paragraph, first sentence (for Silvernail)).

2. For each of the three rejections, the Office relies on Otto to teach the limitation at issue.

C. The prior art of Otto.

Otto discloses a plasma pulse CVD method. Otto states "By using the plasma pulse CVD method according to the invention, elementary layers (single layers) of different composition can be deposited. The elementary layers are deposited in a targeted manner pulse for pulse by appropriate selection of the pulse amplitude." (*see* Otto, col. 3 ll. 27-31)

D. What Otto discloses.

Otto discloses a plasma pulse CVD method that does not produce a barrier according to the limitation at issue. (*see* Applicant's Response dated 25 August 2008, pp. 7-8, section (2)) To the contrary, Otto discloses producing a coating by depositing a single ("elementary") layer for each power pulse. "In these [plasma pulse CVD] methods, the electromagnetic radiation which excites the plasma is supplied in a pulsed manner . . . . **With each pulse, a thin layer . . . is deposited on the substrate.**" (*see* Otto, col. 2 ll. 49-53; emphasis added) Each of the individual layers may have a composition which is different than the composition of the layer on either side of it.

For producing a gradient layer, one would, as a rule, proceed such that, in an initial experimental sequence, the dependence of the layer characteristics or layer compositions from pulse duration, pulse amplitude and pulse interval is determined. For producing the actual gradient layer, these parameters are so controlled that the desired gradient occurs in the direction of growth of the layer. **The precision with which the gradient is determined initially is governed by the requirements imposed on the layers. According to the method of the invention, it is possible without difficulty to change the composition of the layer on the substrate in the direction of layer growth from one layer to the next.** (*see* Otto, col. 6 ll. 20-31; emphasis added)

E. The rejections of Claims 1 and 8 are improper.

Otto fails to disclose the limitation at issue. Instead, Otto discloses a method for creating a coating containing multiple individual layers where a gradient may be formed not within a particular layer but across multiple single layers that are stacked on top of each other. The Office's position that "Otto teaches the composition is adjusted

“virtually without delay (col. 5, lines 43+)”” (*see* Final Office Action dated 12/10/2008, page 6 second full paragraph) does not refute the fact that Otto’s method deposits single, individual layers. While Otto may be able to deposit the individual layers faster than the prior art (which is an object of the invention – *see* Otto, col. 2 ll. 35-37) Otto is limited to depositing one individual layer per power pulse thereby creating a coating composed of multiple individual layers. This is not the same as the barrier required by the claims where “at least one of said diffusion-inhibiting barriers comprises a material, the composition of which varies substantially continuously across a thickness thereof”. Accordingly, it is respectfully requested that all the rejections for each of Claims 1 and 8 be withdrawn.

## **II. Claims 4-7 and 11-15**

Claims 4-7 and Claims 11-15 currently stand rejected as being unpatentable over each of the above-mentioned three combinations of prior art. Claims 4-7 depend either directly or ultimately from Claim 1 and Claims 11-15 depend either directly or ultimately from Claim 8. The rejections of Claims 4-7 and 11-15 are improper at least based on their dependency from the improperly rejected independent Claims 1 and 8, respectively. Withdrawal of the rejections for each of Claims 4-7 and 11-15 is respectfully requested.

### III. CONCLUSION

Applicant respectfully requests review of the final rejections and withdrawal of the final rejections in view of the above comments and Applicant's previous responses. The Office has failed to provide a teaching for the limitation at issue. Applicant further respectfully requests allowance of the application containing Claims 1, 4-8, and 11-15.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to **Deposit Account No. 04-1679**.

Respectfully submitted,

/mcc/

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